PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a traffic control signal for the intersection of Lamont St./ E. Oldtown Rd. at Maryland Ave./ Virginia Ave. in the City of Cumberland. Lamont St./ E. Oldtown Rd. are considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA four (4) phase, full-traffic-actuated mode. The Lamont St./ E. Oldtown Rd. through movements will operate concurrently with concurrent pedestrian movements across the north and south legs of the intersection. The Maryland Ave./ Virginia Ave. through movements will operate concurrently with actuated pedestrian movements across the east and west legs of the intersection.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, and a video camera detection system housed in a base mounted cabinet are to be installed at this location.

A phone drop shall be provided for communication with the controller.

EQUIPMENT LIST

Equipment to be furnished and/or installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization for Traffic Signal Construction.
Lump Sum	LS	104	Maintenance of traffic for Traffic Signal Construction.
7	CY	205	Test pit excavation.
1	EA	818	27 ft. steel twin mast arm pole with a 60 ft. mast arm.
1	EA	818	12 ft. "mini" mast arm.
5	EA	818	10 ft. steel pedestal pole with break away transformer base.
1	EA	816	Traffic signal controller and base mounted cabinet with "Aries" computer monitoring program and video detection equipment (Note: Controller and cabinet shall be purchased from Econolite. Econolite shall preform wiring and testing. Contact Mr. Rick Dunmyer (410) 768-4601).
4	EA	---	Video camera detection (to include 100 LF of necessary cable).
8	EA	814	12 in., black faced, one-way, three section (R,Y,G) adjustable traffic signal head with mast arm mounting hardware and tunnel visors (Red and Green indications to be LED lenses).
2	EA	814	12 in., one-way, two section (symbolic DW, WK) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
3	EA	814	12 in., two-way, two section (symbolic DW, WK) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.
1	EA	814	12 in., two-way, two section (symbolic DW, WK) adjustable pedestrian signal head with side pole mounting hardware and cut-away visors.
5	EA	817	Pushbutton assembly with pushbutton sign.
6	EA	811	Handhole.
700	LF	810	2-conductor electrical cable (No. 14 A.W.G.).
425	LF	810	3-conductor electrical cable (No. 14 A.W.G.).
675	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
350	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
60	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
350	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
100	LF	805	2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
200	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
60	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
10.5	CY	801	Concrete foundation for traffic signal equipment.
7	EA	804	Ground rod - ¾ in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a underground electrical service.
1	EA	---	Phone drop for controller communication.
1	EA	---	Cut, clean, galvanize, and cap mast arm.
1	EA	---	Cut, clean, galvanize, and cap mast arm pole.
Lump Sum	LS	---	Remove existing traffic signal equipment.
Lump Sum	LS	---	As-built for City of Cumberland [on CADD].

SIGNS

23-26 — W 3-3

27,28 — STOP / RIGHT TURN ONLY — R 1-1 R3-3(4)

29,30 — R 10-3c 9" x 12" (To Be Installed With corresponding Pedestrian Signals)

31-33 — R 10-3c 9" x 12" (To Be Installed With corresponding Pedestrian Signals)

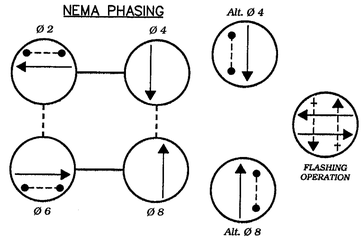
SIGNALS

1-8 — "LED" / "LED" — 12"

9-18 — 12"

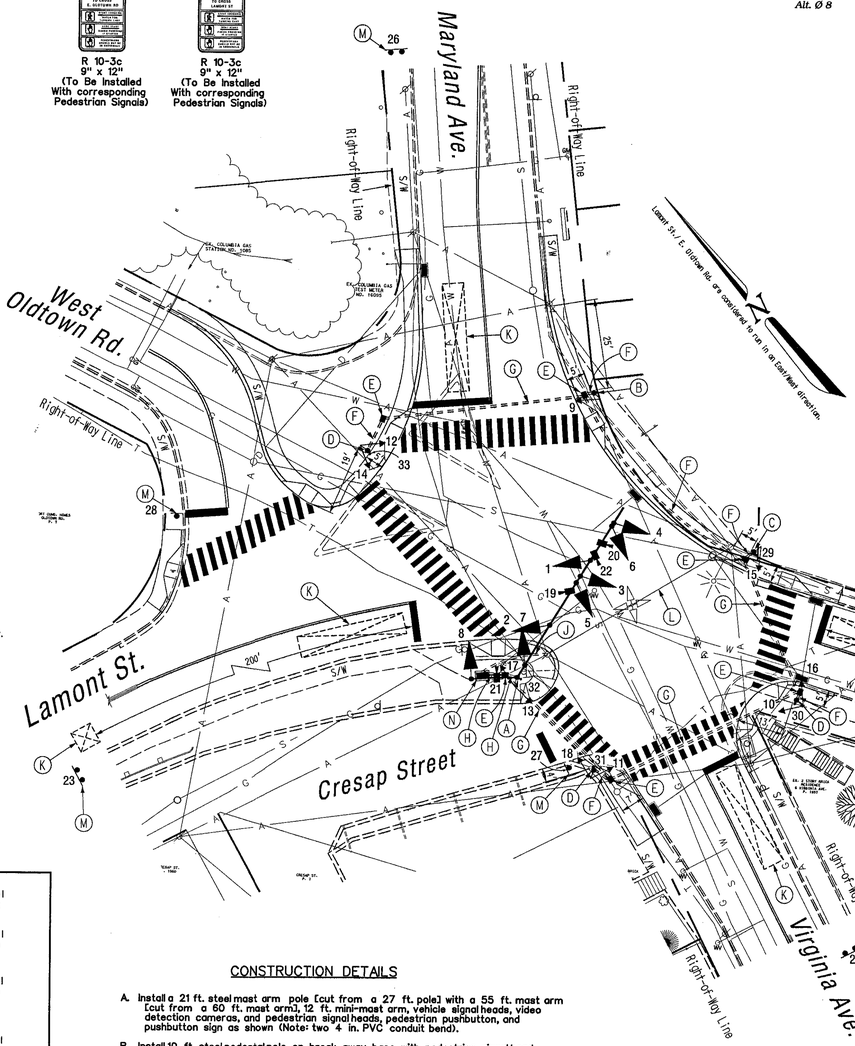
19-22 — Video Detector

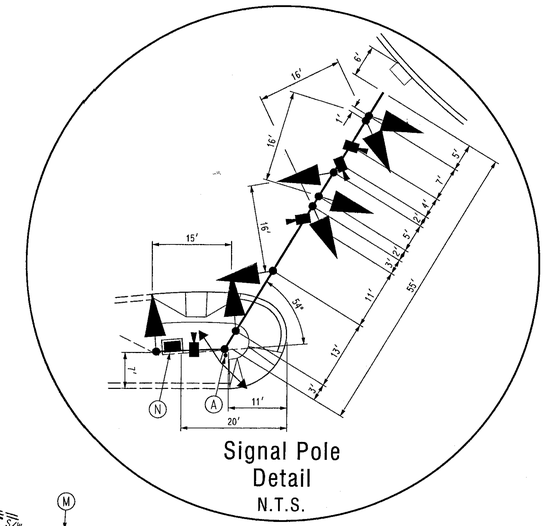
NEMA PHASING



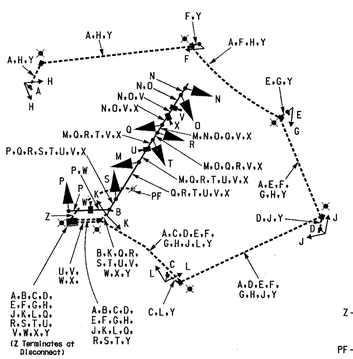
Phasing Chart

	1	2	3	4	5	6	7	8	9-12	13-18
Phase 2 & 6	G	G	G	G	R	R	R	R	WK	DW
Ped Clearance	G	G	G	G	R	R	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	R	R	R	R	DW	DW
Ped Clearance	R	R	R	R	G	G	G	G	DW	DW
4 & 8 Change	R	R	R	R	Y	Y	Y	Y	DW	DW
Phase Alt.4 & Alt.8	R	R	R	R	G	G	G	G	DW	WK
Ped Clearance	R	R	R	R	G	G	G	G	DW	FL/DW
Alt.4 & Alt.8 Change	R	R	R	R	Y	Y	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK





Wiring Diagram



A D B E C — 2-Conductor Electrical Cable (No. 14 A.W.G.)

F G — 3-Conductor Electrical Cable (No. 14 A.W.G.)

H M J N K O L P — 5-Conductor Electrical Cable (No. 14 A.W.G.)

Q R S T — 7-Conductor Electrical Cable (No. 14 A.W.G.)

U V W X — Video Detector Cable

Y — Bare Copper Ground Wire (No. 6 A.W.G.)

Z — 3-Wire (No. 4 A.W.G.) for Traffic Signal Electrical Service

PF — Proposed Underground Electrical Service By Alleghany Power

— Proposed Grounding Rod

CONSTRUCTION DETAILS

A. Install a 21 ft. steel mast arm pole [cut from a 27 ft. pole] with a 55 ft. mast arm [cut from a 60 ft. mast arm], 12 ft. mini-mast arm, vehicle signal heads, video detection cameras, and pedestrian signal heads, pedestrian pushbutton, and pushbutton sign as shown (Note: two 4 in. PVC conduit bend).

B. Install 10 ft. steel pedestal pole on break away base with pedestrian signal head (Note: one 2 in. PVC conduit bend).

C. Install 10 ft. steel pedestal pole on break away base with pedestrian signal head, pedestrian pushbutton, and pushbutton sign (Note: one 2 in. PVC conduit bend).

D. Install 10 ft. steel pedestal pole on break away base with pedestrian signal heads, pedestrian pushbutton, and pushbutton sign (Note: one 2 in. PVC conduit bend).

E. Install handhole.

F. Install 2 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.

G. Install 4 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.

H. Install 2 pieces of 4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.

J. Proposed underground electrical service by Allegany Power Company and phone drop.

K. Video detector zone.

L. Remove existing span wire and flasher signal head.

M. Signs shown are to be installed by others. See Signing/Marking Plans for details.

N. Install NEMA 6 base mounted cabinet/controller and all necessary equipment for an underground electrical service and phone drop. Controller to be positioned to utilize existing sidewalk as courtesy pad.

NOTES

1. Geometrics shall be confirmed prior to the installation of signal equipment.
2. Conduits shall be installed prior to the installation of pavement markings and final pavement surfacing.
3. All underground and overhead utilities shown on these plans are schematic and are not to be considered complete. The Contractor shall be responsible for notifying all utility companies prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal equipment will occur, the Contractor shall notify the appropriate Project Engineer immediately.
4. All signal equipment shall be installed to final grade.
5. All pavement markings are either existing or are proposed. See Signing/Marking plans for details.

MD-SHA APPROVALS

TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION — 11-22-02

ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION — for Dimitrios A. Zafiris

CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION — 11-27-02

DIRECTOR, TRAFFIC & SAFETY — 11/27/02

F.A.P. NO.	APL-000S(905)E	TS NO.	
S.H.A. NO.	AL710BM1		
COUNTY:	Allegany	T.I.M.S. NO.	
LOG MILE:			

GEOMETRIC LEGEND

EXISTING GEOMETRICS

PROPOSED GEOMETRICS

UTILITY LEGEND

G — G — GAS MAIN
W — W — WATER MAIN
S — S — SEWER MAIN
E — E — ELECTRIC CABLES
D — D — STORM DRAIN
A — A — AERIAL CABLES
T — T — TELEPHONE CABLES

The Traffic Group

The Traffic Group, Inc.
Suite H
9900 Franklin Square Dr.
Baltimore, Maryland 21236
410-931-6600
1-800-583-8411
Fax 410-931-6601
Job No.2002-0520
SIGPLAN.DGN

CITY OF CUMBERLAND MARYLAND

ENGINEERING DEPARTMENT

TITLE

Traffic Signal Plan

Lamont St./ Oldtown Rd. at Maryland Ave./ Virginia Ave.

CITY ENGINEER

NOTES

NORTH — ARROW

REVISION	No.	DATE

REFERENCE DRAWING	No.

FIELD BOOK REF.	BOOK	PAGE

DESIGNED BY:	JES	SURVEYED BY:	
DRAWN BY:	JES	FIELD BOOK No.:	
CHECKED BY:	JJD	TRACED BY:	
SCALE	PLAN VIEW: 1" = 20'		
	PROFILE VIEW: N/A		
DATE: 11/22/02		DWG.:	
PROJ.: 2002-0520		SHEET 1 of 1	

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